Evaluation of the NC More at Four Pre-kindergarten Program



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Evaluation Questions

- What children are being served?
- What are the quality and characteristics of services?
- What are children's outcomes?
- What factors are associated with better outcomes?



- Program characteristics
 - Entire MAF Program, all years
- Classroom practices
 - Each year—Pre-k or Kindergarten
- Child outcomes
 - Each year—Pre-k or Kindergarten
- Random sample of classrooms
 - 2002-03: Pre-k Sample
 - 2003-05: Pre-k Sample, Kindergarten follow-up
 - 2005-07: Pre-k Sample, Kindergarten follow-up
 - 2007-08: Pre-k Sample, More classroom observation



Measures and Methods: More at Four Program Characteristics

- Online databases (MAFPlan & MAFKids):
 - Contracts (e.g., slots allocated and filled)
 - Sites (e.g., operation days, setting type)
 - Classrooms (e.g., teacher qualifications)
 - Children (e.g., demographic characteristics, attendance)



Measures and Methods: Pre-k Classroom Practices (Yrs 3 & 5)

- Classroom practices (ECERS-R) Yrs 3 & 5
 - Ratings of space, personal care, language/reasoning, activities, interaction, program structure, parents and staff
- Literacy environment (ELLCO) Yr 5
 - The extent to which classrooms provide children optimal support for language and literacy development
- Teacher-child interactions (CIS) Yr 5
 - Ratings sensitivity, harshness, detachment, permissiveness



Child Assessments (Fall & Spring)

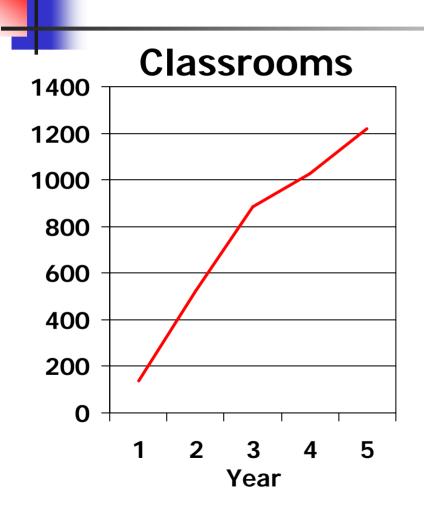
- Receptive language (PPVT-III)
- Literacy skills (Story & Print Concepts, Letter Naming)
- Phonological awareness (WJ-III Rhyming)
- Math skills (WJ-III Applied Problems, Counting Task)

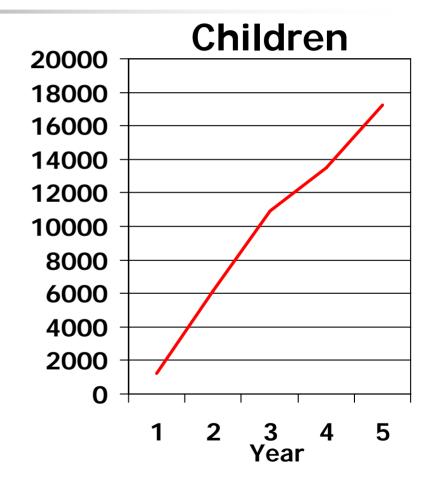
- General knowledge (Color Naming, Social Awareness)
- Social skills (SSRS Social Skills, SSRS Problem Behaviors)
- English language proficiency (preLAS 2000)
 - Covariate



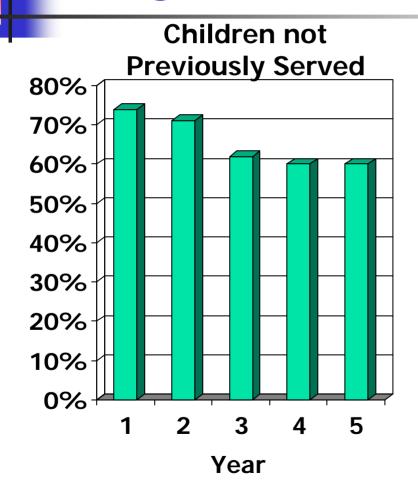
What have we learned about the program?

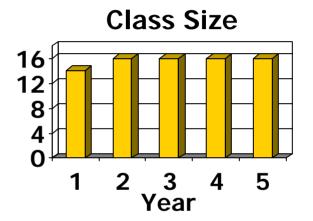
Program Characteristics: Increases in numbers served

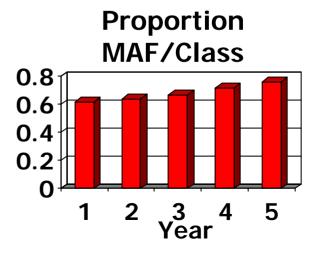




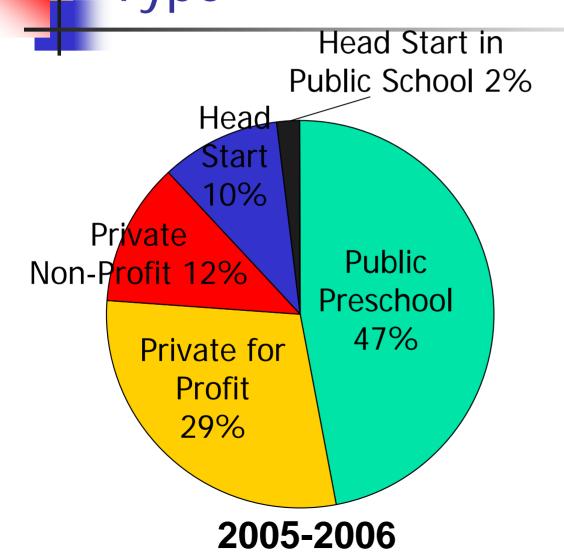
Program Characteristics







Distribution of Children by Site Type



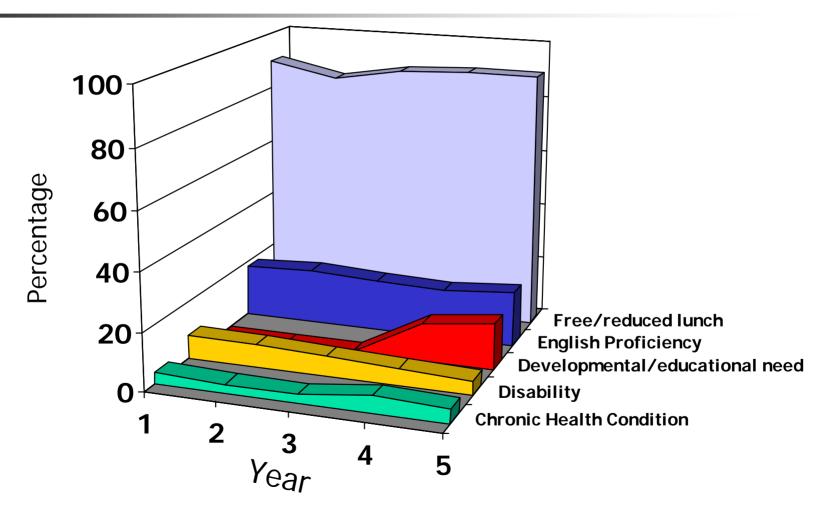
Years 2-4

- Public Preschool (45-48%)
- □ Private for profit (31-32%)
- Private Non-profit (11-12%)
- Head Start (5-8%)
- Head start in public schools (2-3%)
- Other (0-2%)



What have we learned about the children's characteristics?

Overall Child Risk Factors





What have we learned about the teachers' qualifications?

Teacher Education (Yrs 3 & 5)

-	2003-2004			2005-2006			
Highest Degree	Public School Settings	Community Settings	All Settings	Public School Settings	Community Settings	All Settings	
Earned	n=449	n=535	n=984	n=725	n=617	n=1342	
MA/MS of higher	17.2% (77)	4.1% (22)	10.1% (99)	13.8% (100)	3.4% (21)	9.0% (121)	
BA/BS	77.1% (346)	62.6% (335)	69.2% (681)	84.6% (613)	60.9% (376)	73.7% (989)	
AA/AAS	2.5% (11)	25.2% (135)	14.8% (146)	1.4% (10)	31.8% (196)	15.4% (206)	
HS diploma/G ED	3.3% (15)	8.0% (43)	5.9% (58)	0.3% (2)	3.9% (24)	1.9% (26) 14	

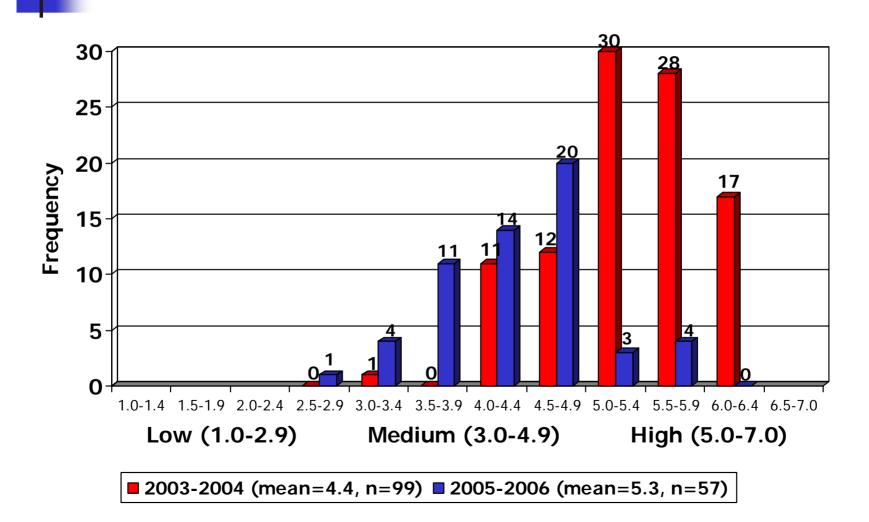
Teacher Credentials (Yrs 3 & 5)

	2	2003-2004		2005-2006			
Highest License/ Credential	Public School Settings	Community Settings	All Settings	Public School Settings	Community Settings	AII Settings	
	n=453	n=536	n=989	n=725	n=617	n=1342	
B-K or Preschool add-on License	(300)	15.9% (85)	38.9% (385)	77.8% (564)	15.4% (95)	49.1% (659)	
Provisional B-K License	1.8% (8)	0.8% (4)	1.2% (12)	5.1% (37)	1.1% (7)	3.3% (44)	
Other Teacher's License	18.3% (83)	10.4% (56)	14.1% (139)	9.8% (71)	8.6% (53)	9.2% (124)	
CDA Credential	0% (0)	3.9% (21)	2.1% (21)	0.5% (4)	6.5% (40)	3.3% (44)	
NCECC	1.1% (5)	(16.2% (87)	9.3% (92)	1.1% (8)	31.4% (194)	15.1% (202)	
None	12.6% (57)	52.8% (283)	34.4% (340)	5.7% (41)	37.0% (228)	20.0% (269) ¹⁵	



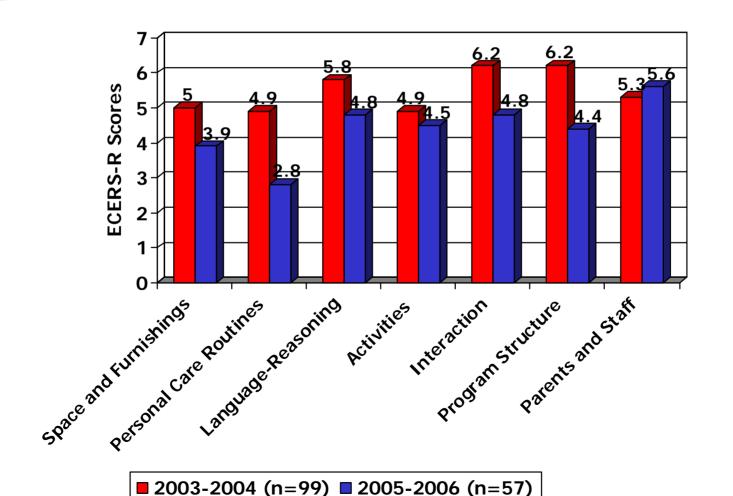
What have we learned about classroom quality, practices, and interactions?

Classroom Practices Scores (ECERS-R Total) (Yrs 3 & 5)



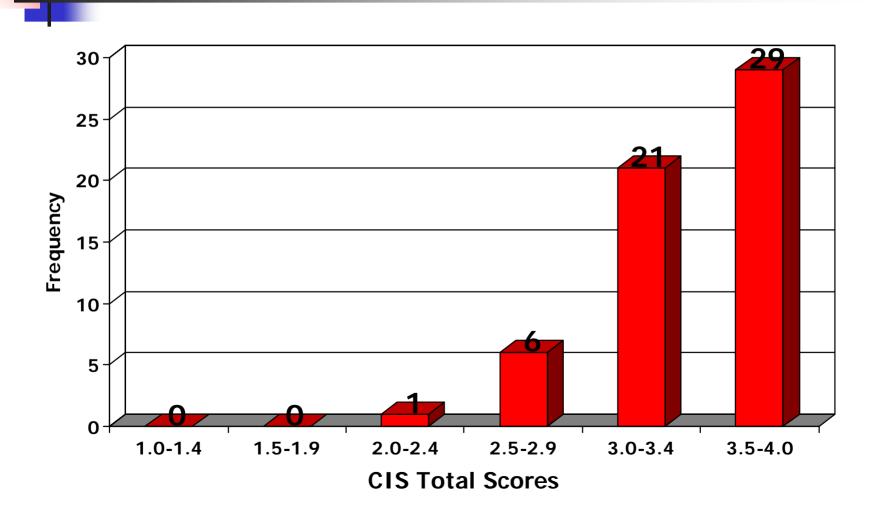


Classroom Practices Subscale Scores (ECERS-R) (Yrs 3 & 5)



Teacher-Child Interactions

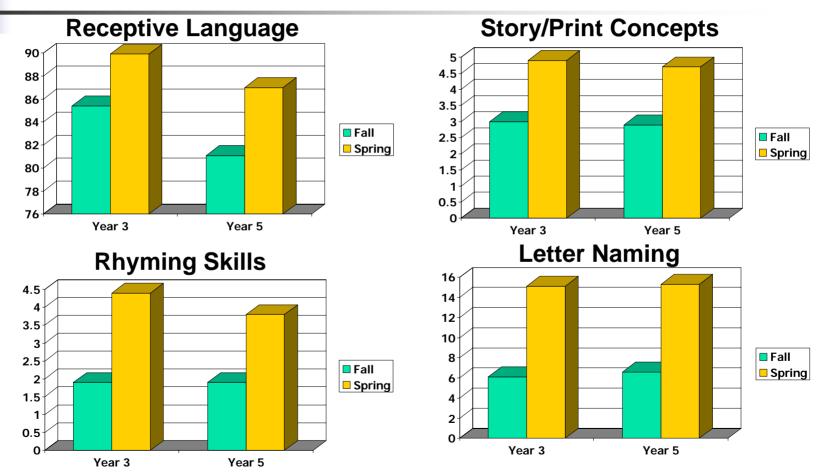
(Yr 5: 2005-2006)





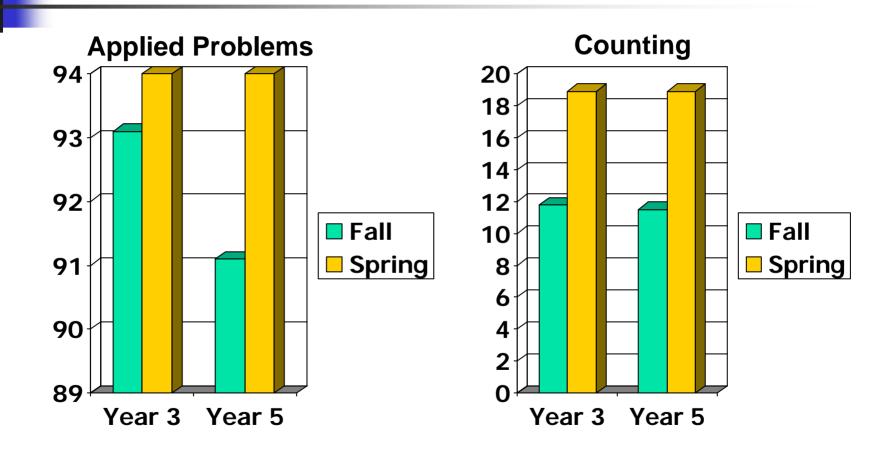
What have we learned about child outcomes?

Child MAF outcomes (pre-K): Language and Literacy



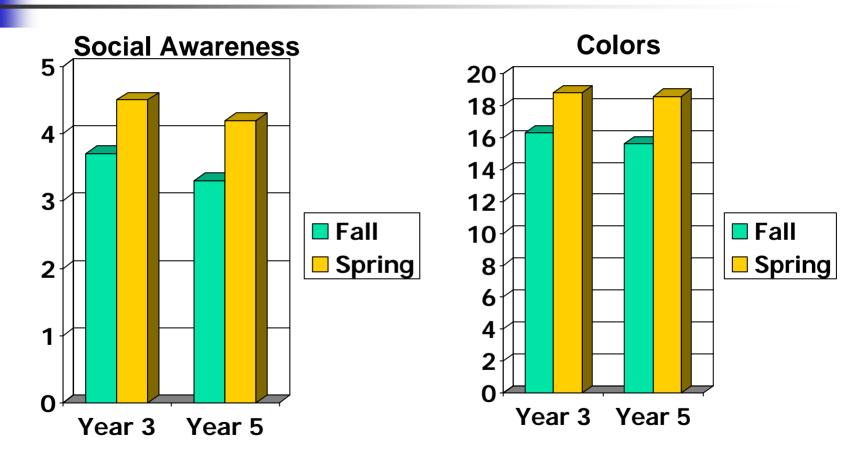
Overall: Significant growth on each measure each year

Child MAF outcomes (pre-K): Math



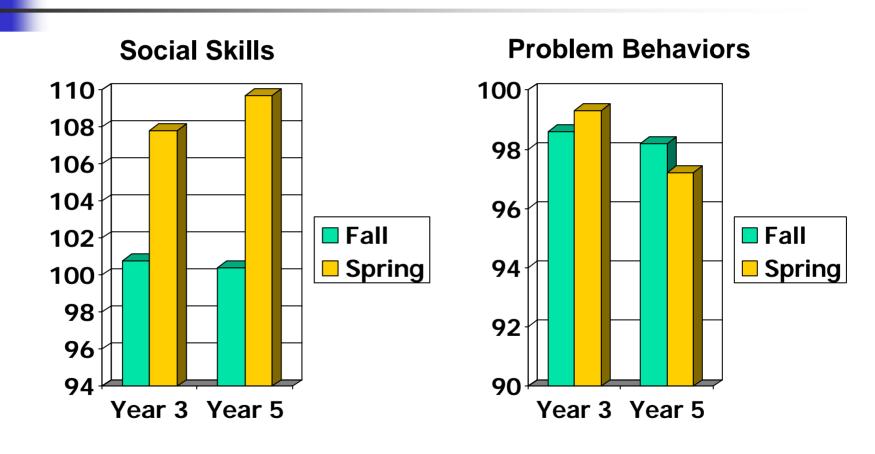
Overall: Significant growth on each measure each year

Child MAF outcomes (pre-K): General Knowledge



Overall: Significant growth on each measure each year

Child MAF outcomes (pre-K): Behavioral Skills

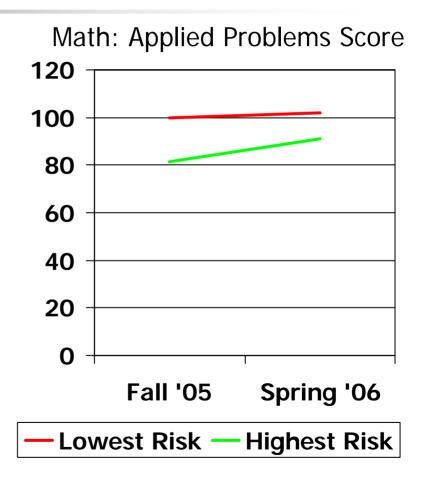




Are the results similar for even the children at the highest risk?

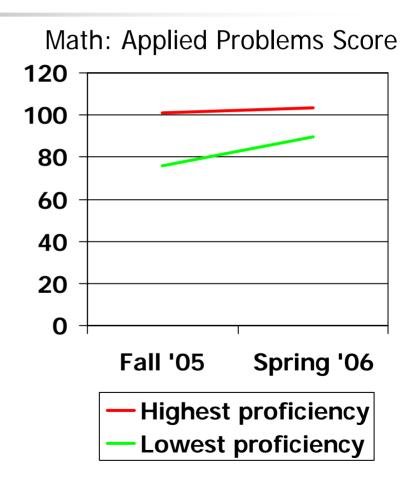


- Greater gains for highest risk group
 - Applied math, color knowledge
 - But fewer gains on rhyming (higher level skill)
- But still lower in most areas
 - Language/literacy (receptive language, rhyming, literacy concepts, letter knowledge)
 - Math (applied math, counting)
 - General knowledge (social awareness)
- No differences in behavioral skills



Differences in Child Outcomes by English Proficiency

- Greater gains for lowest proficiency group
 - Receptive language, applied math, general knowledge, social skills
 - But fewer gains on rhyming (higher level skill)
- But still lower in most areas
 - Language/literacy (receptive language, rhyming, literacy concepts)
 - Math (applied math, counting)
 - General knowledge (colors, social awareness)



Growth in Developmental Skills for Spanish Subsample (Yr 5)

- Spanish-speaking children showed growth in all areas in both English and Spanish measures (except Spanish receptive language)
- Initial Spanish skills positively associated w/ English growth
 - Language/literacy (story concepts, letters)
 - Math (applied math, counting)
 - General knowledge (social awareness)
- Spanish growth positively associated w/ English growth
 - Language/literacy (rhyming, story concepts)
 - Math (applied math, counting)
 - General knowledge (social awareness)
- Evidence for general patterns of skill development, rather than language-specific



Summary & Conclusions

Program Characteristics

- Remain constant despite tremendous growth
 - Range of site types--½ public and ½ community
 - Majority of children still in targeted groups (90% low-income, 60% not previously served)
- Improvement in teacher qualifications
 - B-K in public sites and ece credentials in community sites



Summary & Conclusions

Classroom Quality

- Classroom practices
 - Medium to high range
 - ECERS scores decreased in 05-06 (1st time)
- Literacy environment
 - Better at setting up environment than doing activities
 - Reading activities better than writing
- Teacher-child interactions fairly sensitive
- No consistent predictors of quality



Summary & Conclusions

Child Outcomes

- Program is working for children
 - Making significant pre-k gains in all areas
 - Not affected by variations in classroom quality (no low quality)
- Special focus on children at greater risk (higher risk total, lower English proficiency)
 - Still behind peers even with greater gains in pre-k
 - Important to support native language skills in conjunction with English skills



2007-2008 Evaluation

- In More at Four classrooms
 - May go to K again next year
- Additional focus on pre-literacy in child assessments
 - Fall and spring assessments
- Additional focus on the classrooms
 - Visiting classes 3 times
 - Can we pinpoint the causes of success?



Thank you

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